



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/810,612 | 03/29/2004 | Munchiko Fukase | 3520.106 | 9706 |

59866 7590 01/29/2007
EDELL, SHAPIRO & FINNAN, LLC
1901 RESEARCH BLVD.
SUITE 400
ROCKVILLE, MD 20850-3164

| |
|----------|
| EXAMINER |
|----------|

JIMENEZ, MARC QUEMUEL

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3726

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/29/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/810,612

Applicant(s)

FUKASE ET AL.

Examiner

Marc Jimenez

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-3, 9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. (US4533581) in view of Shorr (US3877919).

Asaumi et al. teach a ceramic roller which comprises a shaft (col. 1, lines 14-15) and a cylindrical layer, "at least part" of the cylindrical layer (col. 3, lines 59-61, the discs form a cylindrical layer) being made of a ceramic (col. 3, line 28, a fiber is a "part" of the cylindrical layer), with a low bulk density of 0.2 to 1.5 g/cm³ (col. 3, lines 67-68), the ceramic being formed from 100 parts by weight of an inorganic binder (col. 2, lines 55-68, see also the abstract).

Asaumi et al. teach the invention cited above with the exception of having a surface coating and having glass frit or glass frits.

Shorr teaches a similar roll to Asaumi et al. with a surface coating (see figures 4a-4c).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al. with a surface coating, in light of the teachings of Shorr, in order to increase traction as suggested by Shorr (col. 6 lines 31-35).

Art Unit: 3726

The use of a certain type of inorganic binder such as glass frit or glass frits is considered an obvious matter of design choice to a person of ordinary skill in the art, at the time of the invention, because the use of any type of inorganic binder would be suitable as applicant states on page 16, 2nd full paragraph of the specification. Applicant states that "The inorganic material may be glass frits, colloidal silica, alumina sol, silica sol, sodium silicate, titania sol, lithium silicate, water glass, or the like. The inorganic binder is not restricted to any particular material.". Therefore, the use of colloidal silica or alumina sol as taught by Asaumi et al. would work equally as well as glass frit or glass frits.

Regarding claims 2-3, Asaumi et al. teach using the same "inorganic binder", for example, "colloidal silica" which is what applicant uses (described on page 16, lines 8-17 of the instant specification). Therefore, Asaumi et al. is considered to meet the claimed heat capacity and thermal conductivity.

Note also from MPEP 2112.01:

"Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) (Applicant argued that the claimed composition was a pressure sensitive adhesive containing a tacky polymer while the product of the reference was hard and abrasion resistant. "The Board correctly found that the virtual identity of monomers and procedures sufficed to support a *prima facie* case of unpatentability of Spada's polymer latexes for lack of novelty.").

Regarding claims 9-10, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

3. **Claims 4-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. in view of Shorr as applied to claim 1 above, and further in view of Takei.

Regarding claim 4, Asaumi et al./Shorr teach the invention cited above with the exception of having grooves or convexities and concavities.

Takei teaches in figure 7, embedded fibers **36** on the surface. Therefore, there are grooves to accommodate the fibers **36**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with grooves, in light of the teachings of Takei, in order to accommodate reinforcing fibers.

Regarding claim 5, Asaumi et al./Shorr teach the invention cited above with the exception of having shafts.

Takei teaches a pair of shafts **12**, one of which has the top-end thereof protruding externally from the cylindrical layer **13** and has the other end fixed in the cylindrical layer **13**, the shaft hole forming a hollow portion between the ends of both the shafts **12**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with shafts, in light of the teachings of Takei, in order to provide a lighter overall roll weight by providing two smaller shafts rather than one large shaft that extends the length of the roller.

Art Unit: 3726

4. **Claims 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. in view of Shorr as applied to claim 1 above, and further in view of Tsukida et al. (US5450181).

Shorr teaches that the surface coating is made of organic polymer such as polyimide (col. 6, lines 29-30) instead of the claimed fluoro-resin.

Tsukida et al. teach using a fluoro-resin coating for releasability (col. 5, lines 23-24).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with a fluoro-resin coating, in light of the teachings of Tsukida et al., in order to provide good releasability.

Regarding claim 8, the limitation “may be coated” is considered an alternative limitation that does not have to be included with the roller.

5. **Claims 1-3, 9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. (US4533581) in view of Shorr (US3877919) and Hwang (US20020015603A1).

Asaumi et al. teach the invention cited above with the exception of having a surface coating and having glass frit or glass frits.

Shorr teaches a similar roll to Asaumi et al. with a surface coating (see figures 4a-4c).

Hwang teaches using glass frit as an inorganic binder (see paragraph [0035]).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al. with a surface coating, in light of the teachings of Shorr, in order to increase traction as suggested by Shorr (col. 6 lines 31-35).

Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with glass frit or glass frits,

in light of the teachings of Hwang, in order to provide a typical inorganic binder having outstanding strength as suggested by Hwang.

6. **Claims 4-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. in view of Shorr and Hwang as applied to claim 1 above, and further in view of Takei.

Regarding claim 4, Asaumi et al./Shorr/Hwang teach the invention cited above with the exception of having grooves or convexities and concavities.

Takei teaches in figure 7, embedded fibers **36** on the surface. Therefore, there are grooves to accommodate the fibers **36**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr with grooves, in light of the teachings of Takei, in order to accommodate reinforcing fibers.

Regarding claim 5, Asaumi et al./Shorr teach the invention cited above with the exception of having shafts.

Takei teaches a pair of shafts **12**, one of which has the top-end thereof protruding externally from the cylindrical layer **13** and has the other end fixed in the cylindrical layer **13**, the shaft hole forming a hollow portion between the ends of both the shafts **12**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr/Hwang with shafts, in light of the teachings of Takei, in order to provide a lighter overall roll weight by providing two smaller shafts rather than one large shaft that extends the length of the roller.

7. **Claims 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaumi et al. in view of Shorr and Hwang as applied to claim 1 above, and further in view of Tsukida et al. (US5450181).

Shorr teaches that the surface coating is made of organic polymer such as polyimide (col. 6, lines 29-30) instead of the claimed fluororesin.

Tsukida et al. teach using a fluororesin coating for releasability (col. 5, lines 23-24).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Asaumi et al./Shorr/Hwang with a fluororesin coating, in light of the teachings of Tsukida et al., in order to provide good releasability.

Regarding claim 8, the limitation "may be coated" is considered an alternative limitation that does not have to be included with the roller.

Response to Arguments

8. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3726

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Interviews After Final

10. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

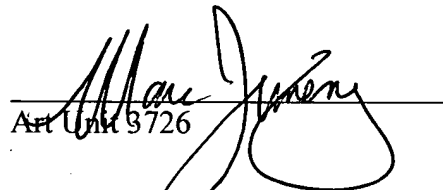
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3726

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJ

1-19-07


Art Unit 3726
MARC JIMENEZ
PRIMARY EXAMINER